

Hydrologic Forecast Tenmile Creek

CONDITIONS 05/03/2020

Lewis & Clark County Water Quality Protection District

SUMMARY

Warmer weather over the past week has reduced snowpack significantly and increased runoff into Tenmile Creek. Snowpack loss at mid elevations over the past week raised flow in Tenmile Creek to 226 CFS on May 1st, and flows have since dropped to below 200 CFS. Snowpack at Frohner Meadows SNOTEL site is nearly gone with the recent warmer temps and, barring significant rain events, may signal a downward trend of streamflow for the season.

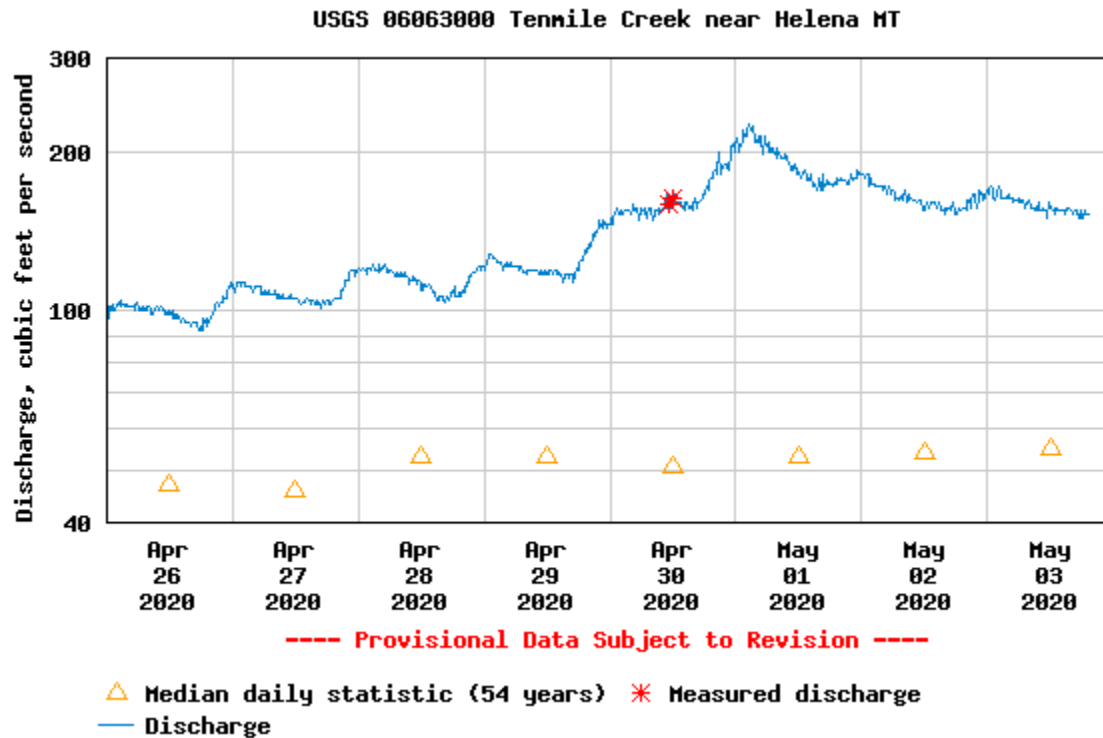
A disturbance bringing moisture to the area is projected for Wednesday and Thursday, and could result in precipitation-driven high flows. Residents should keep track of weather patterns for increasing temperature and precipitation events which could change streamflows quickly, causing small creeks such as Tenmile Creek and Silver Creek to rise rapidly.

The following data and information is used to evaluate hydrologic conditions in the Tenmile Creek drainage. Hydrologic response of Tenmile Creek is predominantly a result of three factors.

1. **Streamflow** measured at Williams St USGS Stream Gauging Station west of the city of Helena
<https://waterdata.usgs.gov/monitoring-location/06063000>
 2. **Snowpack** snow water equivalent (SWE) at the Frohner Meadow SNOTEL Station west of Augusta
<https://www.nwrhc.noaa.gov/snow/snowplot.cgi?FRHM8>
 3. Short-term Helena 5-day weather (**precipitation and temperature**) projection from the National Weather Service
<https://forecast.weather.gov/MapClick.php?lat=46.5924&lon=-112.0403#.XpoTqkZKjBQ>
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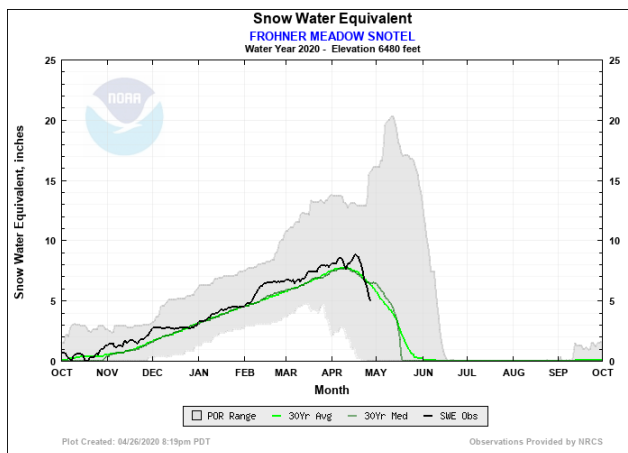
1. STREAMFLOW

Streamflow reached a spring high of 226 CFS on 05/01 and has fallen to 153 CFS on 05/03
Median flow on 05/03 is 55 CFS
Flood stage is ~ 397 CFS

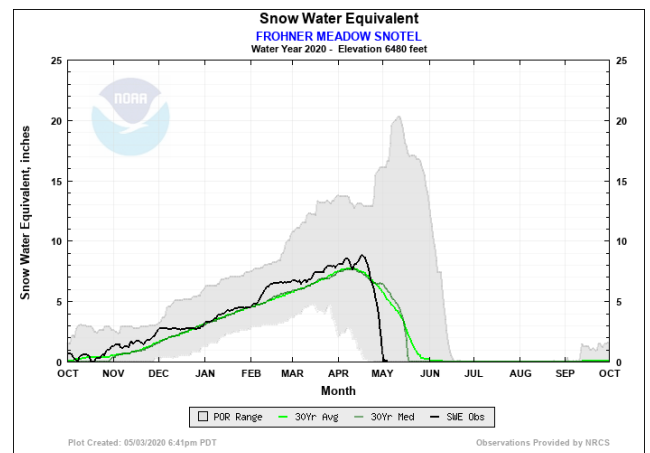


2. SNOWPACK (SWE)

SWE at Frohner Meadows is nearly gone at 0.10" which is at 2% of average. 30-yr average SWE is 5.2". Plots below show loss of Frohner Meadows snowpack (**black line**) in the past week.



SWE April 26



SWE May 3

3. WEATHER

Monday through next Thursday...Normal seasonal temperatures are expected throughout the week with a projected disturbance bringing moisture to the area Wednesday and Thursday. Chances of rain-on-snow events are possible Wednesday and Thursday, and may result in high water conditions.